

**What is claimed is:**

1           1.    A system of data communication handoff,  
2 comprising:

3           a wireless telephony network comprising a base  
4           station system (BSS) and a visit location  
5           register (VLR) corresponding to the BSS,  
6           wherein the BSS manages data communication in a  
7           cell, and the VLR generates a temporary  
8           authentication identity applicable only in the  
9           cell when a mobile terminal is successful  
10          authentication for data communication via the  
11          wireless telephony network, and transmits the  
12          temporary authentication identity to the mobile  
13          terminal; and

14          a wireless local area network (WLAN) located in the  
15          cell comprises a access point, wherein the  
16          access point receives the temporary  
17          authentication identity from the wireless  
18          telephony network before the mobile terminal  
19          associates with the access point, and  
20          authenticates the mobile terminal by verifying  
21          the temporary authentication identity for data  
22          communication via the WLAN upon the mobile  
23          terminal associates with the access point.

1           2.    The system as claimed in claim 1 wherein the  
2 WLAN further comprises an authentication, authorization  
3 and accounting (AAA) server storing information regarding  
4 the WLAN located in the cell.

1           3.    The system as claimed in claim 1 wherein the  
2   temporary authentication identity comprises a temporary  
3   mobile subscriber identity (TMSI).

1           4.    The system as claimed in claim 3 wherein the  
2   temporary authentication identity comprises a temporary  
3   mobile subscriber identity (TMSI).

1           5.    The system as claimed in claim 1 wherein the  
2   wireless telephony network further comprises a home  
3   location register (HLR), and the WLAN further comprises  
4   an authentication, authorization and accounting (AAA)  
5   server and a HLR-AAA gateway.

1           6.    The system as claimed in claim 5 wherein the  
2   temporary authentication identity is transmitted to the  
3   access point via the HLR, the HLR-AAA gateway and the AAA  
4   server.

1           7.    The system as claimed in claim 6 wherein the  
2   temporary authentication identity comprises a temporary  
3   mobile subscriber identity (TMSI).

1           8.    The system as claimed in claim 2 wherein the  
2   wireless telephony network further comprises a home  
3   location register (HLR), and the WLAN further comprises a  
4   HLR-AAA gateway.

1           9.    The system as claimed in claim 8 wherein the  
2   temporary authentication identity is transmitted to the  
3   access point via the HLR, the HLR-AAA gateway and the AAA  
4   server.

1           10. The system as claimed in claim 9 wherein the  
2 temporary authentication identity comprises a temporary  
3 mobile subscriber identity (TMSI).

1           11. A method of data communication handoff,  
2 utilized in a wireless telephony network and a wireless  
3 local area network (WLAN) performing the steps of:

4           generating a temporary authentication identity  
5           applicable in a local cell, with a visit  
6           location register (VLR) when a mobile terminal  
7           is successful authentication for data  
8           communication via the wireless telephony  
9           network, wherein the VLR within the wireless  
10          telephony network;

11          transmitting the temporary authentication identity  
12          to the mobile terminal;

13          receiving the temporary authentication identity with  
14          an access point within the WLAN from the  
15          wireless telephony network before the mobile  
16          terminal associates with the access point; and

17          authenticating the mobile terminal by verifying the  
18          temporary authentication identity for data  
19          communication via the WLAN upon the mobile  
20          terminal associates with the access point.

1           12. The method as claimed in claim 11 wherein the  
2 temporary authentication identity comprises a temporary  
3 mobile subscriber identity (TMSI).

1           13. The method as claimed in claim 11 wherein the  
2 step of receiving the temporary authentication identity,

3 the temporary authentication identity is transmitted via  
4 a home location register (HLR), an authentication,  
5 authorization and accounting (AAA) server and a HLR-AAA  
6 gateway, the HLR being within the wireless telephony  
7 network, and both the AAA server and the HLR-AAA gateway  
8 being within the WLAN.

1 14. The method as claimed in claim 13 wherein the  
2 temporary authentication identity comprises a temporary  
3 mobile subscriber identity (TMSI).